

Remarks

Claims 1-37 were pending in the subject application. By this Amendment, claims 1, 17, 32, and 37 have been amended and claims 18-31 and 34-36 have been cancelled. The undersigned avers that no new matter is introduced by this amendment. Entry of the amendments presented herein is respectfully requested. Accordingly, claims 1-17, 32-33, and 37 are currently before the Examiner for consideration and favorable consideration of the pending claims is respectfully requested.

The applicants have amended the Title of the specification as the Examiner suggested at page 2 of the Office Action. Reconsideration and withdrawal of the objection to the specification is respectfully requested.

Claims 1-17, 32, 33, and 37 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 1, 17, 32, and 37 have been amended in order to clarify that compounds of Formula (I) are used to calibrate a mass spectrometer to allow measurement of other compounds, such as test compounds of unknown molecular mass (e.g., compound Y and/or compound Z). The use of the recited trityl compounds as calibration tools has support; for example, at page 2, lines 20-31, pages 3-4, and throughout the specification and claims as originally filed. The applicants respectfully submit that the term "calibration" is recognized in the art to denote a set of operations that establish the relationship between values of quantities indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material, and the corresponding values realized by standards. Thus, the applicants respectfully submit that one of ordinary skill in the art, when reading the claims in light of the specification, can ascertain with a reasonable degree of precision and particularity the area set out and circumscribed by the claims. Accordingly, in view of the foregoing remarks and the amendments to the claims, reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claim 17 is rejected under 35 U.S.C. §101 as drawn to non-statutory subject matter. As indicated above, claim 17 has been amended to lend greater clarity to the claimed subject matter. Claim 17 has been amended to recite affirmative steps for the claimed method. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §101 is respectfully requested.

Claims 1-6, 12-13, and 16 are rejected under 35 U.S.C. §102(b) as being anticipated by Shchepinov *et al.* (*Innovation and Perspectives in Solid Phase Synthesis, Int. Symposium, 1999*). In addition, claim 37 has been rejected under 35 U.S.C. §102(b) as being anticipated by Berlin *et al.* (*Org. Mass Spectr., 1969*).

Neither the Shchepinov *et al.* abstract nor the Berlin *et al.* abstract discloses using trityl compounds as calibration material in a mass spectrometry procedure, as recited in the claims. The Shchepinov *et al.* abstract discloses that trityl moieties with different masses can be used to tag bases for combinatorial oligonucleotide synthesis. The Berlin *et al.* abstract discloses subjecting trityl substituted compounds to mass spectrometry, and a mechanism for the decay of the trityl cation is presented. However, neither of the cited references teach or suggest the use of the recited trityl compounds to calibrate for mass spectrometry. It is well-settled in patent law that, in order to anticipate under 35 U.S.C. §102, a single reference must disclose within the four corners of the document each and every element and limitation contained in the rejected claims. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). The applicants respectfully submit that the cited references do not teach every element of the applicants' claimed invention. Accordingly, in view of the foregoing remarks and the amendments to the claims, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) is respectfully requested.

Claims 7-11 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Shchepinov *et al.* As indicated above, the Shchepinov *et al.* abstract concerns the use of trityl tags to encode combinatorial oligonucleotide synthesis, in which differently sized tags are used to label bases at each step of a synthesis reaction, allowing identification by mass spectrometry. However, this requires a pre-calibrated mass spectrometer, and there is no indication in the Shchepinov *et al.* abstract that the trityl tags could be used as calibration material for mass spectrometry. Likewise, the PCT publication WO 99/60007 describes using trityl compounds to encode combinatorial oligonucleotide synthesis, which requires a pre-calibrated mass spectrometer. Calibration using the trityl compounds is not taught or suggested. It is well settled that to establish a *prima facie* case of obviousness, "either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of

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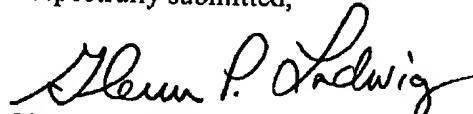
the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The cited references do not teach or suggest using trityl compounds to calibrate for mass spectrometry, as recited in the claims. Accordingly, in view of the foregoing remarks and the amendments to the claims, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) and §103(a) is respectfully requested.

In view of the foregoing remarks and amendments to the claims, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachment: Petition and Fee for Extension of Time